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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,155	03/24/2004	Youn Sub Noh	NOHY3002/EM	6466
23364	7590	12/08/2005	EXAMINER FLANAGAN, KRISTA M	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			ART UNIT 2817	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/807,155	Applicant(s) NOH ET AL.	
	Examiner Krista M. Flanagan	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 10-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: 23 November 2005.  
Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,424,225 to Choi et al (of record).
4. Regarding claim 1, Choi discloses a power amplifier circuit for providing constant bias current over a wide temperature range. Choi has a power amplifier (300), which comprises bias circuitry using current deletion and current supplementation techniques to maintain the bias or reference current of the power amplifier at a stable level as shown in figures 3-5 and in column 2, lines 41-45. The circuit has a reference or bias transistor (316) that provides a reference current to bias the power or amplifying transistor (336) if there is a change in the reference current due to fluctuation in temperature (as taught in the reference at column 7, lines 8-16 and lines 40-48; column 7, lines 17-39; and column 7, line 48 to column 8, line 11). The bias control circuit (310) also inherently provides a reference current in response to fluctuation in voltage since a fluctuation in voltage would lead to a fluctuation in current.

5. Regarding claim 8, Choi discloses a power amplifier circuit for providing constant bias current over a wide temperature range. Choi has a power amplifier (300), which comprises bias circuitry using current deletion and current supplementation techniques to maintain the bias or reference current of the power amplifier at a stable level as shown in figures 3-5 and in column 2, lines 41-45. The circuit has a reference or bias transistor (316) that provides a reference current to bias the power or amplifying transistor (336) if there is a change in the reference current due to fluctuation in temperature (as taught in the reference at column 7, lines 8-16 and lines 40-48; column 7, lines 17-39; and column 7, line 48 to column 8, line 11). Regarding the fluctuation in reference voltage, the bias control circuit sets the voltage at the connection (308) so any change in the reference voltage would not be significant enough to change the operating current.

6. Regarding claim 2 and 9, Choi discloses a bias circuit with a resistor as shown in figure 3, block 312, that is connected between the base of the reference or bias transistor and the reference voltage.

### *Response to Arguments*

7. Applicant's arguments filed 23 November 2005 have been fully considered but they are not persuasive. The Applicant argues, "the current deletion and current supplement techniques of Choi do not prevent fluctuation in the reference voltage from affecting the operation current, as recited in rejected claims 1 and 2 as well as in new claims 8-14." The Examiner disagrees and reasserts to the Applicant that the bias control circuit of Choi inherently provides a reference current in response to fluctuation in the reference voltage since a fluctuation in the reference voltage would lead to a fluctuation in current as the applicant claims. The current deletion and

current supplementation techniques are used in the bias control circuitry to maintain the bias current of the power amplifier as stated in the reference at column 2, lines 41-45.

8. Also, regarding claims 1 and 2, Applicant argues that the current deletion and supplementation techniques of Choi do not prevent fluctuations in the reference voltage from affecting the operation current however the Applicant does not claim prevention of fluctuation in the reference voltage in claim 1. The Applicant merely claims that the bias control circuit is responsive to fluctuations in a reference voltage (and a variation in temperature) without any recitation towards prevention of such.

*Allowable Subject Matter*

9. Claims 3-7 and 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krista M. Flanagan whose telephone number is (571) 272-2203.

The examiner can normally be reached on Monday - Friday, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Flanagan  
20051201



**Robert J. Pascal**  
**Supervisory Patent Examiner**  
**Technology Center 2800**